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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,627	09/08/2003	Joon Keun Lee	434/I/004	1539
170	7590	09/11/2006		EXAMINER
RICHARD M. GOLDBERG				HOFFMANN, JOHN M
25 EAST SALEM STREET				
SUITE 419			ART UNIT	PAPER NUMBER
HACKENSACK, NJ 07601				1731

DATE MAILED: 09/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/657,627	LEE ET AL.
	Examiner John Hoffmann	Art Unit 1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 31 July 2006.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-6 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-6 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The 5th to last line of claim 1 requires that the fiber "always travels substantially around a common circular arc...." Examiner could find no support for this limitation. Moreover, the present specification suggests that this 'always' condition does not exist. Whereas the drawings show that some times the fiber follows an arc, figure 4A shows that some times the fiber does not follow an arc (rather it travels in straight lines and sharp bends). In the present response, (31 July 2006) Applicant argues (page 19, lines 1-6) that Yoshida has a sharp bend in figure 2. The bends shown in Yoshida's figure 2 are less sharp than are shown in Applicant's figure 4A. Thus one of ordinary skill would realize that Applicant's invention does not 'always' provide for the fiber traveling around the arc as claimed.

There is no support for the fixing roller being immediately following the optical fiber processing apparatus. This is deemed to similar to a negative limitation – by prohibiting any additional structure in a specific location merely to avoid the prior art.

MPEP 2173.05(i) Negative Limitations

The current view of the courts is that there is nothing inherently ambiguous or uncertain about a negative limitation. So long as the boundaries of the patent protection sought are set forth definitely, albeit negatively, the claim complies with the requirements of 35

U.S.C. 112, second paragraph. Some older cases were critical of negative limitations because they tended to define the invention in terms of what it was not, rather than pointing out the invention. Thus, the court observed that the limitation "R is an alkenyl radical other than 2-butenyl and 2,4-pentadienyl" was a negative limitation that rendered the claim indefinite because it was an attempt to claim the invention by excluding what the inventors did not invent rather than distinctly and particularly pointing out what they did invent. *In re Schechter*, 205 F.2d 185, 98 USPQ 144 (CCPA 1953).

A claim which recited the limitation "said homopolymer being free from the proteins, soaps, resins, and sugars present in natural Hevea rubber" in order to exclude the characteristics of the prior art product, was considered definite because each recited limitation was definite. *In re Wakefield*, 422 F.2d 897, 899, 904, 164 USPQ 636, 638, 641 (CCPA 1970). In addition, the court found that the negative limitation "incapable of forming a dye with said oxidized developing agent" was definite because the boundaries of the patent protection sought were clear. *In re Barr*, 444 F.2d 588, 170 USPQ 330 (CCPA 1971).

Any negative limitation or exclusionary proviso must have basis in the original disclosure. If alternative elements are positively recited in the specification, they may be explicitly excluded in the claims. See *In re Johnson*, 558 F.2d 1008, 1019, 194 USPQ 187, 196 (CCPA 1977) ("[the] specification, having described the whole, necessarily described the part remaining."). See also *Ex parte Grasselli*, 231 USPQ 393 (Bd. App. 1983), aff'd mem., 738 F.2d 453 (Fed. Cir. 1984). The mere absence of a positive recitation is not basis for an exclusion. Any claim containing a negative limitation which does not have basis in the original disclosure should be rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Note that a lack of literal basis in the specification for a negative limitation may not be sufficient to establish a *prima facie* case for lack of descriptive support. *Ex parte Parks*, 30 USPQ2d 1234, 1236 (Bd. Pat. App. & Inter. 1993). See MPEP § 2163 - § 2163.07(b) for a discussion of the written description requirement of 35 U.S.C. 112, first paragraph.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The terms "adjusted curvature radius", "circular arc" and "curvature radius". First it is noted that these terms are not define in the specification. Second the plain meaning of "radius" is substantially along the lines of "a line segment extending from the center of a circle to the circumference." But what is shown in figure 3 is not a circle. Whereas the it is somewhat like a circle, there is no indication as to how one determines what the radius R2 is. Moreover, the existence of the curving/festooning is merely a matter of intended use. If one were to apply more tension to the fiber, there would be no curvature between the rollers.

Still further, it is noted in the drawings that where the fiber meets the rollers, the fiber takes the curvature of the roller. And thus the fiber will undergo the same stress. Note the equation of page 4, line 8 – the equation makes no mention of the length of the bend. For example, roller 17 of figure 5 shows that the fiber is bent around 17 – perhaps about 30 degrees. Based on applicant's equation, the stress would be the same as if it were bent 90 degrees.

The term "processing apparatus" is deemed to be indefinite as to its meaning. As per page 18 of the present response (31 July 2006) applicant appears to argue that Yoshida's roller 23 is not part of the "processing apparatus". Examiner could not find any definition for this term which indicates that a roller cannot be part of a processing

apparatus. One of ordinary skill would be very confused as to what the claim is limited to, since it apparently excludes such a common mechanical element.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim 1 is rejected under 35 U.S.C. 102(b) or (e) as being anticipated by Yoshida WO 00/44680 or US 6519404.

See the prior Office action for the manner in which the references are applied.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 2-6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida 6519404 and Askins H1268 as applied to claim 1 above, and further in view of Butterworth-Heinemann and Sclater et al.

See the Office action of 6/28/05 which discusses the tertiary references. It would have been obvious to substitute a link connected CAM since it is well known in the art that a link connected CAM may be used in lieu of other devices in order to impart motion.

Response to Arguments

Applicant's arguments filed 31 July 2006 have been fully considered but they are not persuasive.

Applicant's arguments with respect to claim 5 have been considered but are moot in view of the new ground(s) of rejection.

It is argued that figure 3 clearly shows that the fixing roller immediately follows the optical fiber processing apparatus. Examiner disagrees. Drawings are assumed to be not drawn to scale – unless indicated that they are drawn to scale. The rollers could be quite distant (i.e. not immediate) from the apparatus. More to the point, at page 8, line 16, of the specification, there is a capstan which is not shown. The mere absence of additional structure/distance between the apparatus and the fixing roller is not basis for a limitation.

It is argued that the terms "adjusted curvature radius" and "curvature radius" are defined at page 9, lines 5-12 and figure 3. Examiner could find no definition in those locations. Applicant does not indicate what the definition is.

It is further argued that arc is "substantially" circular. As indicated previously, Examiner understands the claim does not require a true circle. But it is unclear how much variation would result in an apparatus that would not read on the claims. Most importantly, see below where Examiner points out that Applicant has a sharper bend than the prior art, and yet Applicant argues that prior art has an angle that is too sharp. Thus there exists a contradiction which indicates that there is no possible definition for the claim terms.

Applicant also seems to argue that the length is an inherent feature of stress equation because the length relates to R. The concept Examiner was trying to convey: with a constant R, the length of the bend is immaterial – the stress would be identical whether the bend was 15 degrees or 180 degrees.

It is argued that Yoshida is not concerned with breakage and does not recognize the problem of bending stress. This is deemed to be largely irrelevant - the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

It is argued that Applicant's invention does not have any sharp bends – whereas Yoshida does. Examiner disagrees. Applicant's figure 4A (and the associated text)

reasonably suggests that the invention can have 90 degree bend – and still read on the claimed invention. Yoshida's 4 and 5 has a less-sharp bend – than Applicant's invention. It is deemed that by force of Applicant's disclosure, the claims are open to having bends as sharp as Yoshida has.

It is also argued that Yoshida fiber does not travel around any circular arc. Applicant has not pointed to any definition of "circular arc" that would exclude Yoshida's arrangement. Moreover, the Office has set forth in the last Office action (4/27/06, page 5) the broadest reasonable interpretation of claimed path. Applicant has not pointed out any error in the Office's analysis (except for mere disagreement with the final conclusion) or what the appropriate/alternative interpretation of the claim might be. And, most importantly, applicant's own figure 4A and 6A and page 9, lines 19-24 clearly indicate that the curvature/radius is to be interpreted very broadly – to the degree that it encompasses angles of about 90 degrees. And given that the roller is in the middle of slot 21 – the double-headed arrow reasonably suggests that the roller can move down- thus creating an even sharper bend. Still further, Yoshida's rollers (fig 2) can function in locations 4' and 5' which are much closer to applicant's figure 3 in terms of the sharpness of the angles.

It is also argued that Yoshida's roller arrangement is that the input direction is the same as the output direction. Examiner disagrees, it is clear that the directions are different. Applicant has not limited the claims through a definition or limitation in any way that would exclude Yoshida. It appears to be a difference of about 20 degrees. Although drawings are not to be viewed as being drawn to scale, it is clear that Yoshida

discloses there is a difference in direction. Alternatively, one can compare, use roller 5 as the exit point for the curvature, rather than roller 6 as applicant chosen.

It is also argued that Yoshida's roller 23 is not part of the "cited roller combination between roller 26 and wind-up reel 27." Examiner does not follow this argument. For the main reason that the claims do not require a "roller combination"

IT is also argued that Yoshida rollers 4 and 5 do not immediately follow the fixing roller 23, nor are they on the same side of the fiber. This is largely irrelevant because the rejection clearly indicates that 25 is the fixing roller (see rejection).

It is also argued that rollers 4-5 do not gradually adjust the curvature. It is clear they adjust it just as gradually as applicant's figure 4A and 6A adjust. Furthermore, at location s 4' and 5' the adjustment is even more gradual.

It is also argued that although Examiner could draw a circle around the Yoshida rollers, it does not mean that the fiber travels in a substantially circular path. Examiner admits that this is true. But the same applies to Applicant's own invention: just because applicant labels a distance "R2" as being a radius, it does not mean it is a radius. Applicant gives no standard for what is meant by "substantially circular" and other similar terms which would exclude Yoshida's invention. Rather applicant merely asserts that Yoshida's fiber path is not circular –no evidence or convincing argument is given.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1731

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John Hoffmann
Primary Examiner
Art Unit 1731

Jmh

9-5-06